

Dunn County Land & Water Resource Management Plan Fourth Edition 2017-2026

December 6, 2016

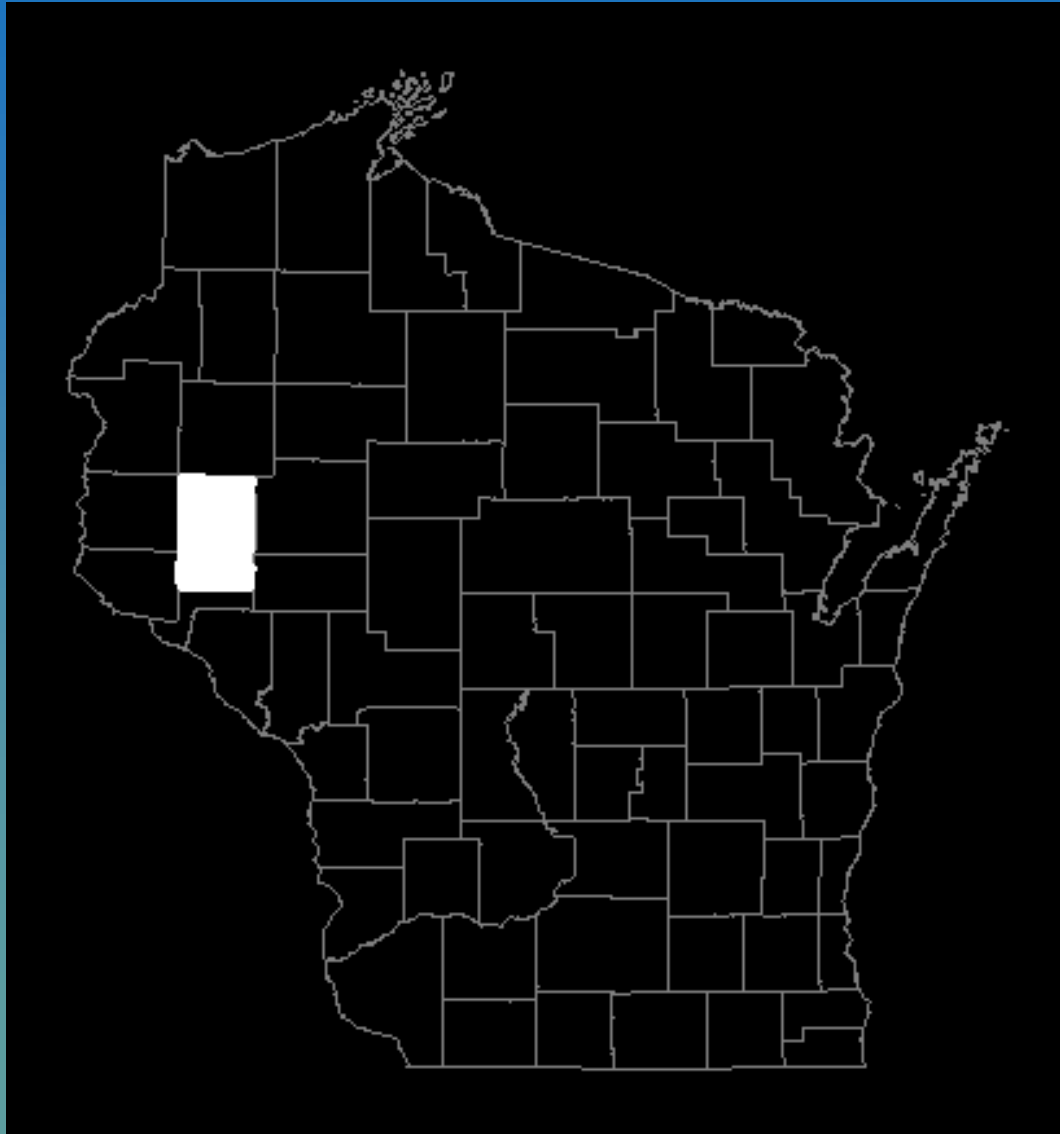
Dan Prestebak
County Conservationist

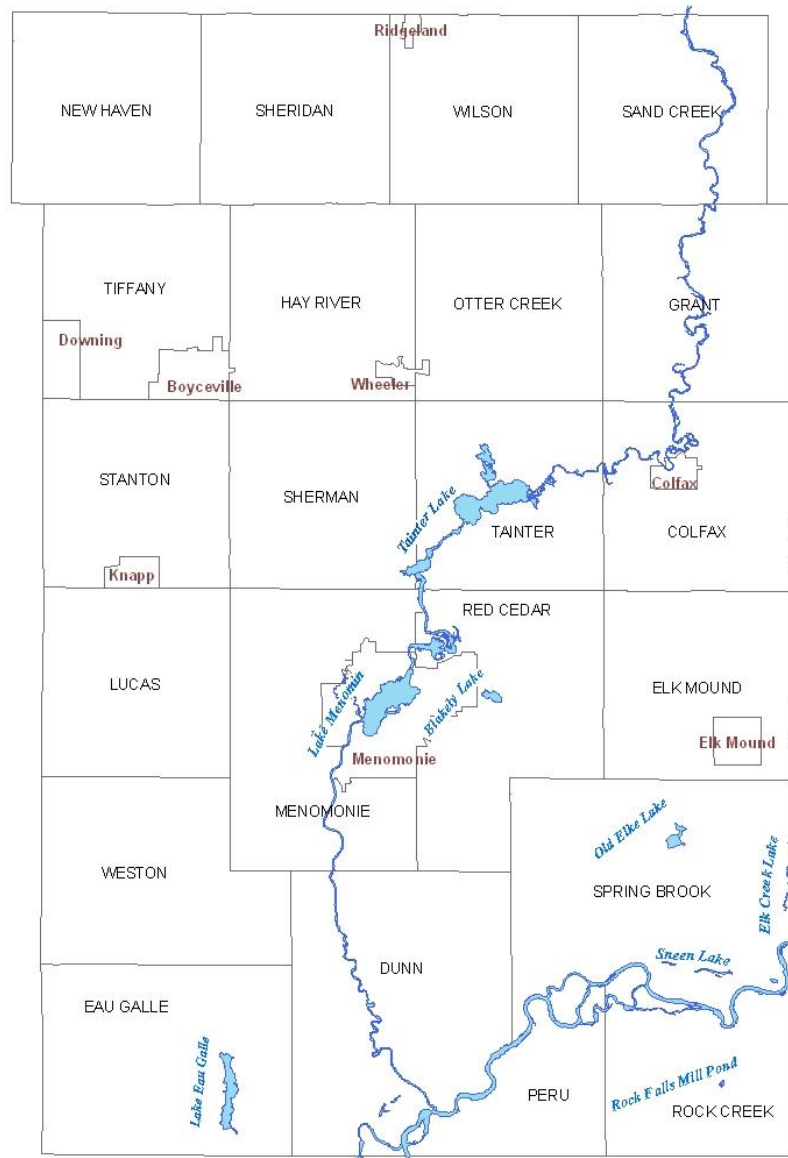
A stylized, teal-colored mountain range graphic is located in the bottom right corner of the slide. The mountains are depicted with sharp, angular peaks and ridges, creating a silhouette effect against the blue background.

Presentation Outline

- ◆ 2017-2026 Dunn County Land & Water Resource Management Plan
 - Location and Current Land Use Highlights
 - How We Planned in Dunn County
 - Resource Inventory
 - 2012 LWRM Implementation
 - ◆ Accomplishments
 - ◆ New Programs and Initiatives
 - Looking Ahead to Implementation 2017-2026
- ◆ Questions and Comments

Dunn County





Why Do We Plan In Dunn County?

- ◆ Local leaders are in the best position to successfully manage natural resources
- ◆ An Opportunity
 - ◆ Every Citizen
 - ◆ Conservation
 - ◆ Water Quality



How We Planned In Dunn County

- ◆ Citizens Advisory Committee
 - 19 Members
- ◆ Technical Advisory Committee
 - 29 Members



How We Planned In Dunn County

- ◆ Three Meetings
 - Directional Plan
 - New Programs
 - City of Menomonie
 - NR-151
 - Sociology of Watersheds



How We Planned In Dunn County

◆ Breakout Sessions

- Soil Health
- Ground Water
- Surface Water
- Red Cedar TMDL
- Red Cedar Demo Farm
- Non Ag Resources
 - ◆ Woodlands
 - ◆ Native Habitat
 - ◆ Pollinators

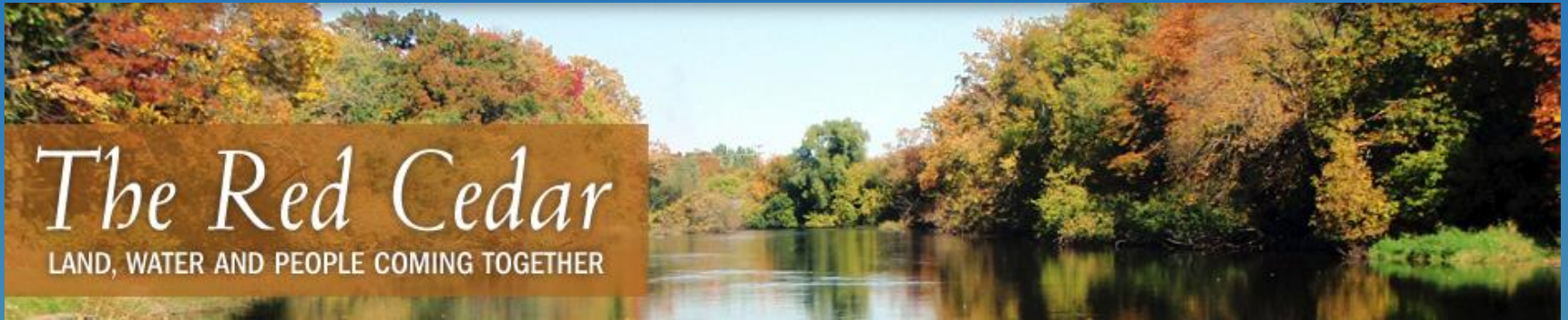


How We Planned In Dunn County

- ◆ Open Discussions
 - Surface Water
 - Ground Water
 - NR-151
 - Soil Health
 - Grassed Waterways



Red Cedar Conference

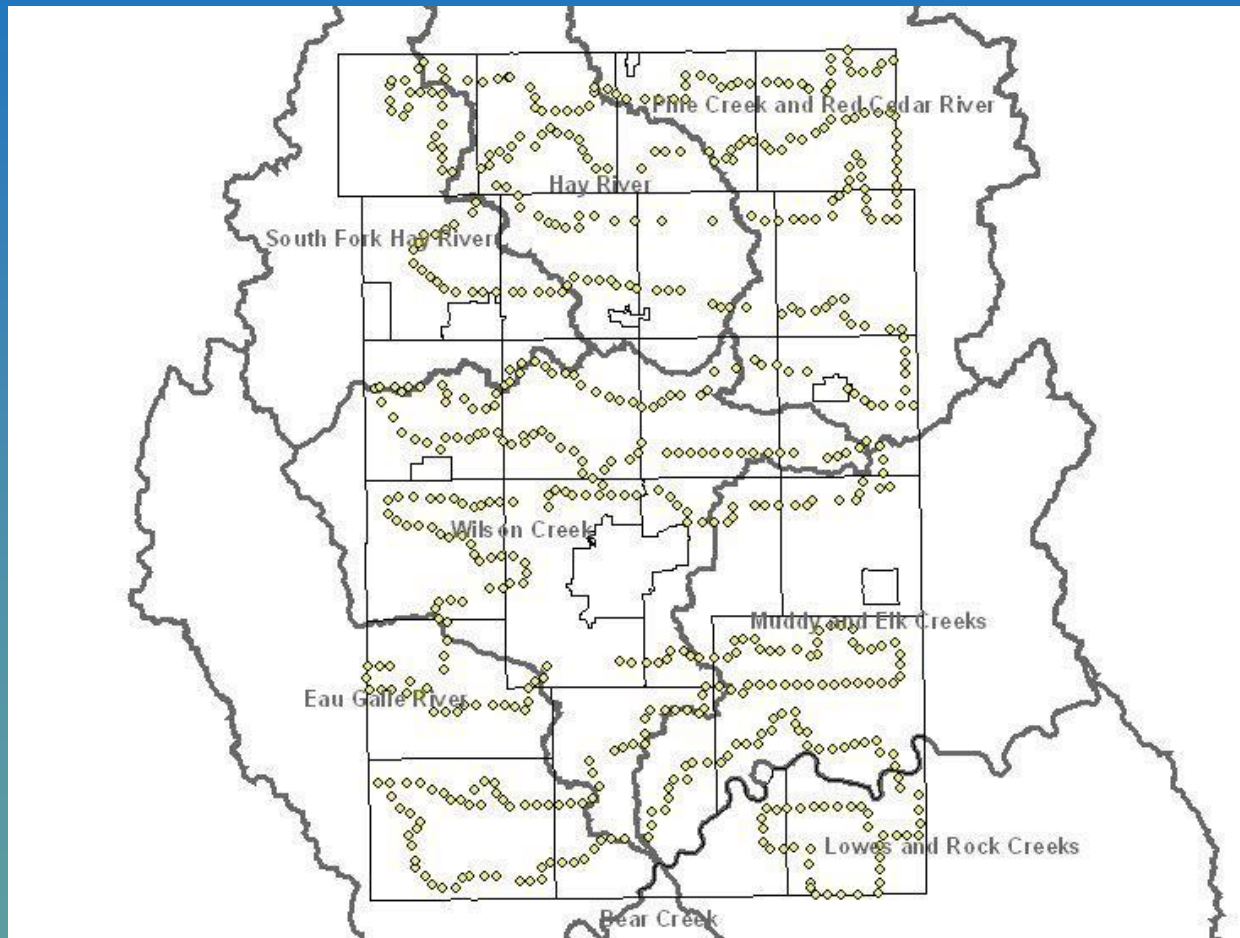


- ◆ The Red Cedar: Land, Water and People Coming Together
- ◆ March 9th, 2017

Resource Assessment (Pages 22-44)



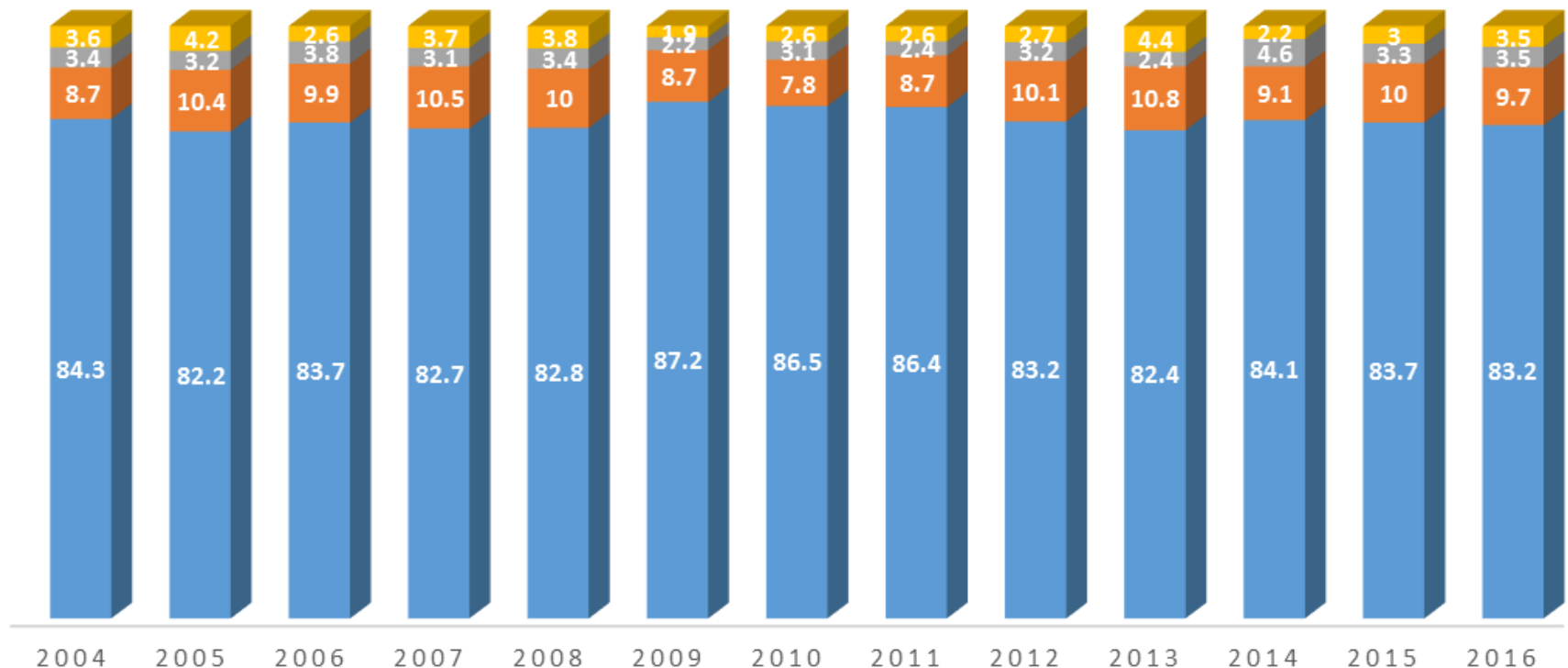
Transect Survey



Changes in Erosion Rates

AVERAGE SOIL LOSS FROM AGRICULTURAL FIELDS

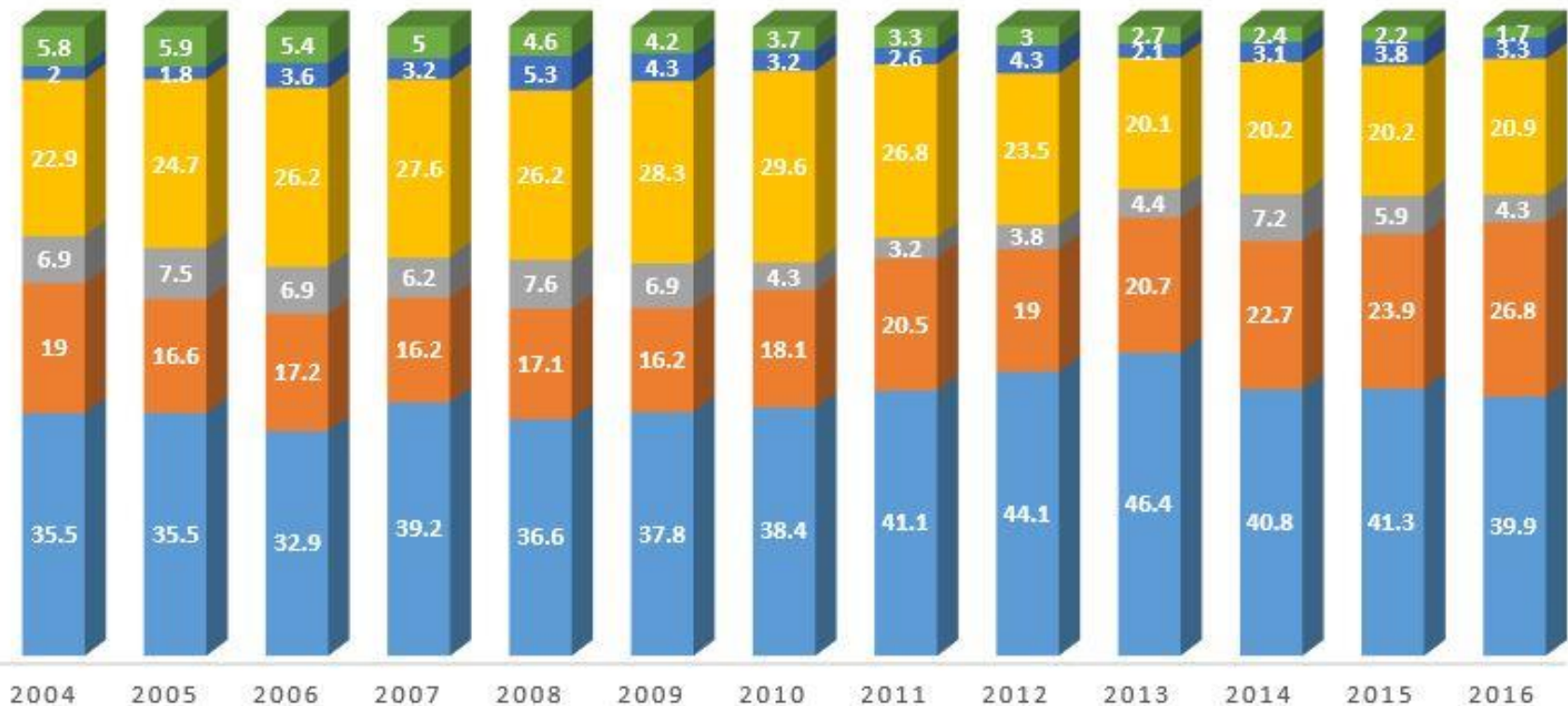
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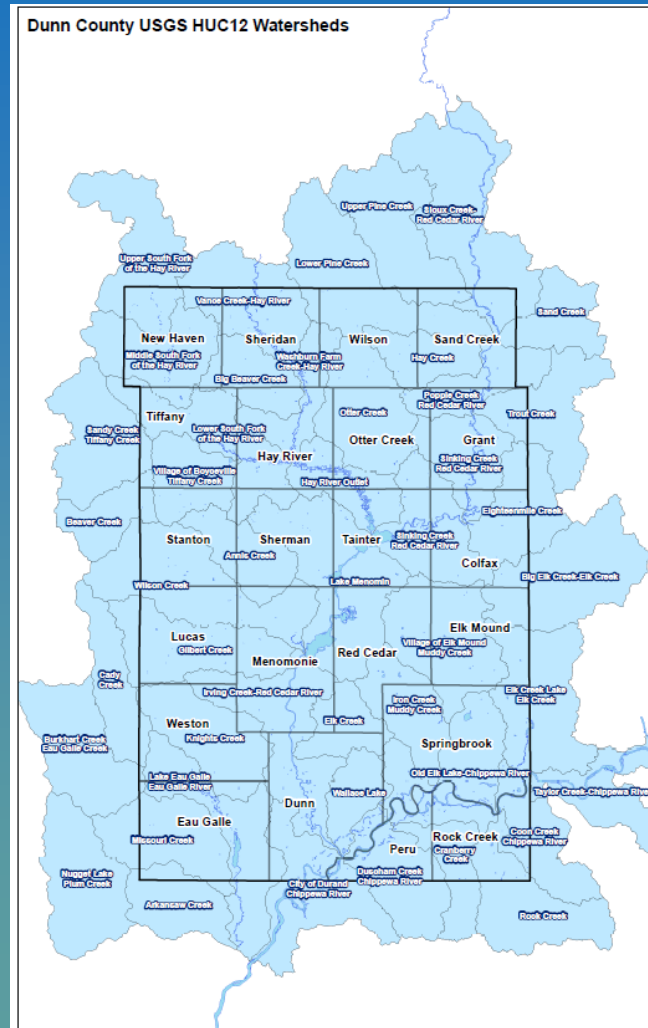


Changes in Cropland

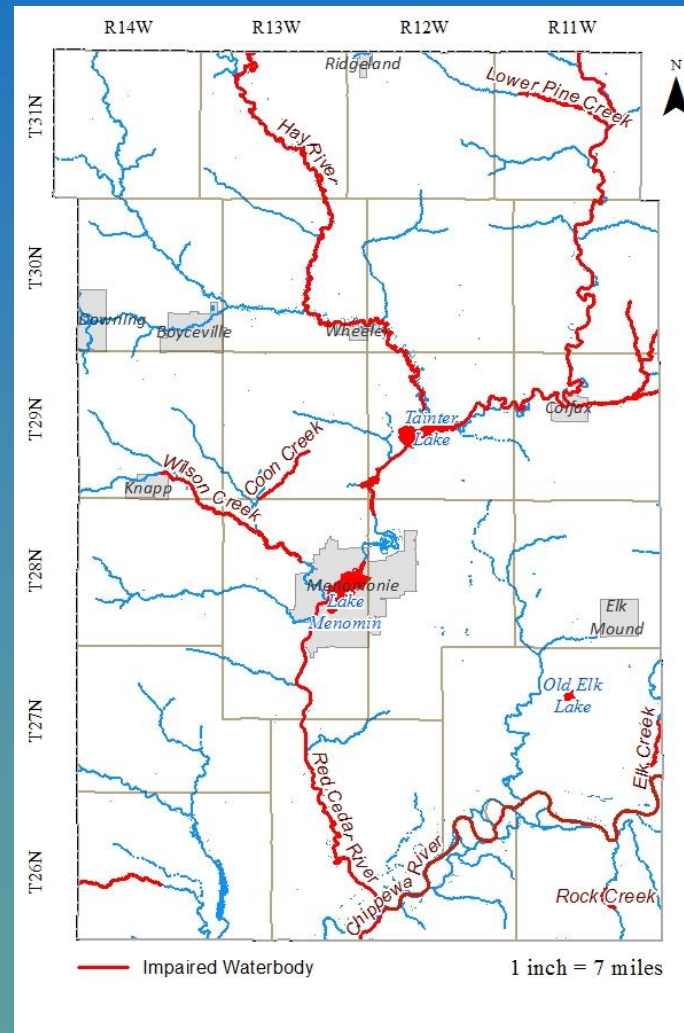
CROP TYPES BY PERCENTAGE OF CROPLAND

■ Corn ■ Soybeans ■ Small Grains ■ Hay ■ Other (specialty) ■ CRP

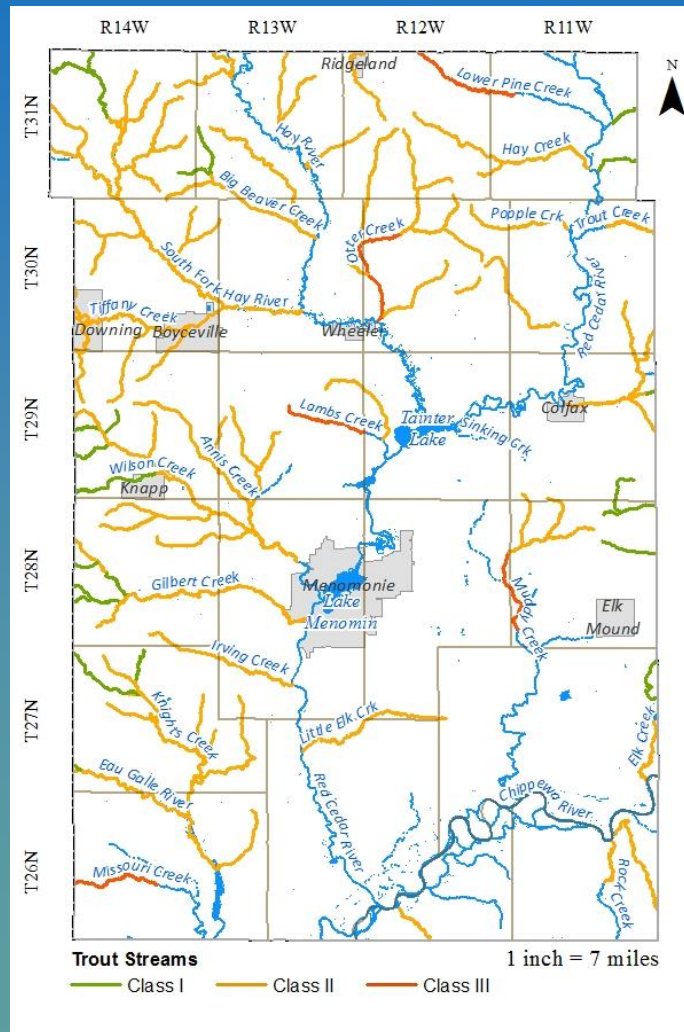




Impaired Waters



Trout Waters



Woodlands

- ◆ 180,000 Acres
 - 12,000 Acres Publicly Owned
 - 54,000 Acres in MFL
- ◆ ~114,000 Acres Without a Management Plan



2012- 2016 Accomplishments

LWRM PLAN ACCOMPLISHMENTS (2012-2016)											
	50.63 (Ea) Manure Storage Closure	50.65 (LF) Access Road Crossing	50.68 (Ac) Cover Crop	50.69 (Ea) Critical Area Stabilization	50.73 (Ea) Grade Stabilization Structure	50.75 (LF) Livestock Fencing	50.78 (Ac) Nutrient Management	50.88 (LF) Streambank & Shoreline Protection	50.885 (LF) Stream Crossing	50.96 (Ac) Waterway System	50.97 (Ea) Well Decommissioning
TOTALS	3	50	756	2	7	7,849	4,084	810	424	4.00	21

- ◆ 26 Non-Metallic Mining Permits/Year
- ◆ 58,000 Acres Nutrient Management Plans completed with CVTC
- ◆ 20 New Manure Storage Permits
- ◆ 49,000 Acres CSP (\$2,000,000)
- ◆ 18,000 Acres EQIP (\$3,700,000)

New Programs and Initiatives

(Pages 9-21)

Dunn County Board

- Directional Plan
 - Farmland Preservation Plan
 - Non-Metallic Mining Overlay
 - Livestock Siting
 - Shoreland Protection Ordinance
 - Water Quality Contingency Fund
 - Water Quality Specialist Position
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New Programs and Initiatives Cont.

(Pages 9-21)

Civic Governance

- Interstate Civic Governance Organizing Agency
 - Dunn Environmental Education Steering Committee
 - Hay River Farmer-Led Watershed Council
 - Lower Chippewa Invasives Partnership
 - Red Cedar Watershed Partnership
 - Wilson Annis Creek Watershed Partnership
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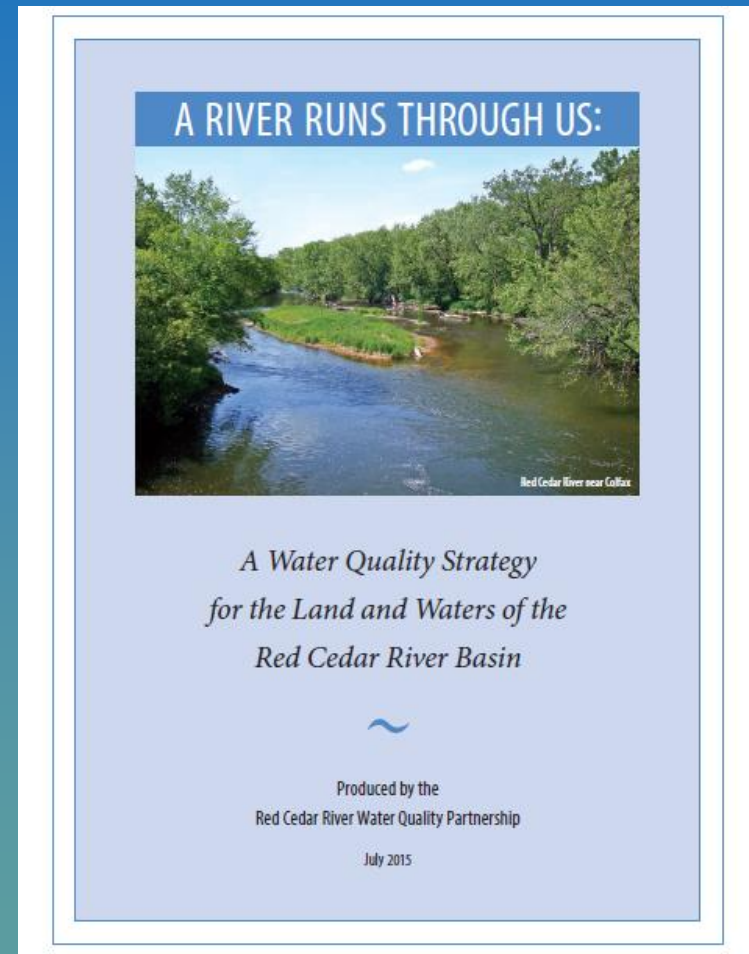
New Programs and Initiatives Cont.

(Pages 9-21)

- ◆ Red Cedar Basin Assessment
- ◆ Red Cedar Demonstration Farm
- ◆ Town of Grant AEA
- ◆ Tri-County Groundwater Level Monitoring

Red Cedar Basin

- ◆ Tainter/Menomin TMDL Approved by EPA September, 2012
- ◆ Nine Key Element Implementation Plan approved by EPA
 - 65% Reduction in P



- ◆ The Red Cedar River Watershed covers most of Barron and Dunn Counties and parts of several others
- ◆ 1,900 square miles
- ◆ Historically forest- now mostly agricultural land uses



How is Phosphorus Getting In The Water?

Many Sources

- ◆ Farm Fields
- ◆ Lawns & Yards
- ◆ City Streets
- ◆ Failing Septic Systems
- ◆ Barnyards/Manure
- ◆ Eroding Shorelines and Banks
- ◆ Point Sources



TMDL Recommendations

TMDL Phosphorus Load Allocation for Tainter Lake

Category	1990/93 Baseline Annual Phosphorus Load (pounds)	Annual Phosphorus Load Allocation (pounds)
Non-Point Sources	463,400	157,400
WPDES Permits	42,900	20,100
Totals	506,300	177,000

Practices and Projected Load Reductions

BMP	Lbs P reduced
No-Till Farming Practices (60,000 – 86,0000 acres)	63,000
Manure Storage Structures (50)	34,000
Nutrient Management Plans/Practices (86,000 acres)	31,500
Cover Crops (107,000 acres)	18,000
Traditional Conservation Practices (10% of cropland)	11,000
Treatment of Milk House Waste (50)	6,600
Urban Storm Water Control (non-permitted)	5,700
Stream Buffers on Riparian Frontage (10%)	4,700
Barnyard Upgrades (68)	3,800
Replace Failing, Critically-Located Septic (440)	420
Storm Water Control on Rural Properties (2200 lots)	220
Wetland Restorations (200 acres)	210
Past Barnyard Reductions	27,000
Total	206,150

City of Menomonie MS-4




City of Menomonie MS-4





Dunn County Invasive Species

- ◆ We have found 39 invasive plant species that are harming our native plants and animals
 - ◆ These plants are spreading daily by mowing practices, animals, human traffic, etc.
 - ◆ Lower Chippewa Invasives Partnership (LCIP)
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Invasive Species



◆ Native Habitat Protection

Wisconsin's Runoff Rules for Farmers



Wisconsin's Runoff Rules

what farmers need to know

January 2013 DNR Pub. No. WT 756 REV 1/13



Farms, like all major industries, must follow environmental requirements to control runoff from fields, pastures and livestock facilities. Otherwise this pollution can harm our lakes, streams, wetlands and groundwater.

Wisconsin adopted administrative rules in 2002 (NR 151), with revisions effective in 2011 that set statewide performance standards and prohibitions for all Wisconsin farms. All farmers must comply with these standards and prohibitions. Cost-share funding may be available to assist with compliance. Some state and local programs may require compliance whether or not cost-share funds are available.

This fact sheet explains the basic information that farmers need to know about these rules and how to comply with them. It is recommended that farmers contact their county land conservation staff for further details on these rules and their impact on farm operations.

Agricultural Standards and Prohibitions:

ALL FARMERS MUST:

- Meet tolerable soil loss ("T") on cropped fields and pastures.
- Annually develop and follow a Nutrient Management Plan (NMP) designed to keep nutrients and sediment from entering lakes, streams, wetlands and groundwater. Farmers may hire a certified crop advisor or prepare their own NMP if they have received proper training.
- Use the phosphorous index (PI) standard to ensure that their NMP adequately controls phosphorous runoff over the accounting period.
- Avoid tilling within 5 feet of the edge of the bank of surface waters. This setback may be extended up to 20 feet to ensure bank integrity and prevent soil deposition.

Additional Standards:

FARMERS WITH LIVESTOCK MUST:

- Prevent direct runoff from feedlots or stored manure from entering lakes, streams, wetlands and groundwater.
- Limit access or otherwise manage livestock along lakes, streams and wetlands to maintain vegetative cover and prevent erosion.
- Prevent significant discharges of process wastewater (milkhouse waste, feed leachate, etc.) into lakes, streams, wetlands, or groundwater.

FARMERS WHO HAVE, OR PLAN TO BUILD, MANURE STORAGE STRUCTURES MUST:

- Maintain structures to prevent overflow and maintain contents at or below the specified margin of safety.
- Repair or upgrade any failing or leaking structures to prevent negative impacts to public health, aquatic life and groundwater.
- Close idle structures according to accepted standards.
- Meet technical standards for newly constructed or significantly altered structures.

FARMERS WITH LAND IN A WATER QUALITY MANAGEMENT AREA (500 feet from streams, 1,000 feet from a lake, or in areas susceptible to groundwater contamination) MUST:

- Avoid stacking manure in unconfined piles.
- Divert clean water away from feedlots, manure storage areas, and barnyards located within this area.

Photos: Jeffery J. Strickland, Brian Papp and Lynne Schaeffer

Steps for Addressing Non-Compliance

- ◆ County & DNR generally work together
- ◆ County conducts compliance status evaluations
 - Verifies compliance or non-compliance
 - Estimate cost to reduce NPS discharges
 - Determines if cost sharing is required
- ◆ County & DNR identify cost-sharing sources
 - NOD, TRM, SWRM, EQIP, Other (i.e. MDV)
- ◆ Write notice to landowner with cost-share offer and compliance period (County and/or DNR)
- ◆ County develops cost-share agreement
- ◆ County oversees installation & monitors maintenance
- ◆ If needed, County/DNR pursue enforcement

Whole Foods produce department with bees




Whole Foods produce department without bees



Dunn County Environmental Policy Statement


“To include environmental impact in the decision making process. In particular, to develop an Environmental Policy including emphasis on water quantity and quality, to prevent contamination of groundwater and surface water, addressing both point and nonpoint sources, and to preserve public water provided by aquifer systems”

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Directional Plan Initiative Alignment

172 Programs/Services Align with 4 Priority Initiatives


72 Align Strongly with Environmental Initiatives
Administration, UW-Extension, Public Works –
Facilities & Parks and Highway Divisions, Health
Department, Emergency Management, Sheriff,
Solid Waste and Recycling, Planning & Zoning
and Survey

A stylized silhouette of a mountain range in a teal color, located in the bottom right corner of the slide.

What Does this Mean for Watershed Planning?

- ◆ Each watershed has characteristics that are social, economic, cultural, and political
 - ◆ These follow “social laws”, but humans are hard to predict and many social theories suggest contradictions make context important
 - ◆ Need anthropological, sociological, economic, political science, and other social science disciplines to evaluate those characteristics
 - ◆ Understand that all people and institutions, including yourselves (not just program evaluation, but really institutional capacity and community capacity evaluation) play a vital role in water quality
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- A stylized, layered mountain range graphic in shades of teal and green, located at the bottom right of the slide.

Why Implement Civic Governance?

- ◆ Heightens Collaboration and Partnerships
 - ◆ Helps Citizens Identify and Understand Their Role
 - ◆ Builds Trust
 - ◆ Leverages Resources (Experience, Knowledge, Time, Money, etc.)
 - ◆ Expands the Community Capacity to Address Complex Problems
- 

6 Years Before Earth Day (Page 46 &47)

Menomonie, Wisconsin
January 15, 1965.

Senator Gaylord Nelson
Senate Office Building
Washington, D. C.

Dear Senator Nelson:

The Dunn County Soil and Water Conservation District firmly believes that a "Great Society" cannot endure unless we increase our efforts to preserve our soil and water resources.

There was an article in today's Eau Claire Leader, January 15, under the headlines "U. S. Conservation Programs Face Cut". We definitely are not in agreement with this legislation.

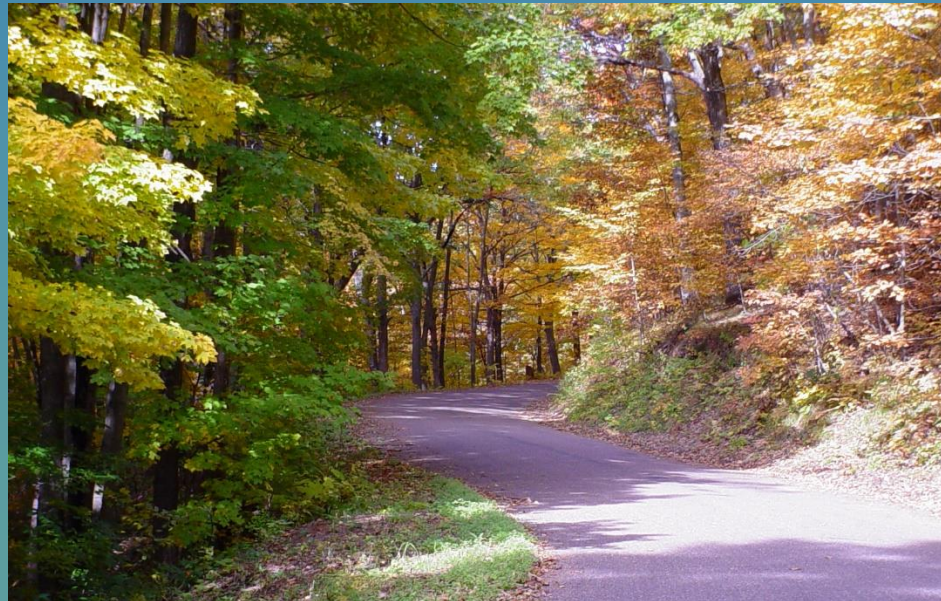
Dunn County is a rural area and most of its citizens rely heavily on farm prosperity for their livelihood.

Since 1940 we have had several Soil Conservation Service employees working out on the land with farmers helping them apply needed soil and water conservation practices on their farms. Of the original twelve inches of topsoil on our hillsides we have lost on an average about four inches, in the short span of 100 years of cultivation. This land has to last us a good many hundreds of years and needs better management than it has received in the past.

We are told that by the year 2,000 farmers are going to have to produce twice as much as they do today. The farm population now is 7% of the total population and is expected to drop to 5% by 1975. This points to increased farm efficiency, which certainly cannot be achieved on land impoverished by erosion.

Plan Implementation

- ◆ The quality of our soil and water resources is a direct reflection of how well citizens manage these on public and private lands



Questions?

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- ◆ 715-231-6535

